

One Simple Rule For C&I Solar: Understand The Client's Business

The ability to propose, win and install solar systems for upscale businesses requires a mastery of project management.

■ Michael Puttré

Michael Campbell, CEO of Laguna Beach, Calif.-based Ra Power & Light, likens cash-deal commercial and industrial (C&I) solar projects to unicorns - rare and elusive. Catching one requires a precise understanding of the value proposition.

Conveying the value proposition means convincing a potential client's ownership - and, possibly, a board of directors - that a solar installation makes business sense. This is a long process.

Everybody thinks he has it hard. But, the successful practitioners of C&I solar have to have a portfolio approach to their own businesses. Though residential and utility-scale specialists have their own nuances and business models, the flatness of the C&I market segment relative to the growth in the other two gives some indication of the difficulties involved in making business owners sign.

Making the business case for solar is just the first, long step in the process. The actual project generally requires installers to embark on a weeks - if not months - long effort to build a significant construction atop the customer's place of business without adversely affecting the conduct of that business.

Successfully bringing this off - not to mention the portfolio of such projects at a given moment that are required for a C&I solar developer to remain in business - requires a finely honed project-management machine.

"As with all things on these projects, we base our strategy for project management on the business processes that are going on inside the building," Campbell says. "You have to harmonize the project-management

schedule with the practical reality of what your client does for a living."

Keep moving

Peyton Boswell, manager of project development and project financing for New York City-based EnterSolar, points out that you would have a very difficult time running a successful business if you only ran five C&I projects per year.

"To be effective in the C&I segment - with sophisticated businesses as your customers - you have to have people who can interact on the ownership and company-board level," Boswell says. "The owners or board are going to be very involved in the decision to invest in solar and whether to own or lease it or to enter into a power purchase agreement."

Such understanding comes at a cost. In order to attract and retain the quality of person that C&I developers need to interact with business owners



EnterSolar staged its 1.5 MW rooftop PV project for Clare Rose around four meticulously planned "crane days." Photo courtesy of EnterSolar



The size and openness of the client's rooftop gave EnterSolar's installers a lot of options, even though the facility is a busy distribution hub. Photo courtesy of EnterSolar

at a high level, the firm has to have the utilization throughput to generate enough income to make that work. Therefore, the successful C&I solar business needs to have a portfolio approach at a high level so that it is able to provide a very high-quality, comprehensive service offering over enough projects to make enough money.

Negotiating the boardroom is only one part of the challenge. Once the contracts are signed, the project itself takes center stage. Though a residential installation may be performed in some fraction of a day according to a well-scripted formula and a utility-scale plant may unfold over a period of months with plenty of elbow room, a high-end rooftop C&I installation requires a precise orchestration of people, material and scheduling - with little or no margin for error.

Ultimately, C&I specialists focus a lot of their efforts on project management.

"If you are trying to do this in a piecemeal fashion, you are going to have a hard time," Boswell says. "With C&I, you have as little of a net as you are going to have in this industry.

There is mission-critical stuff happening below the roof every day. You just can't have a mess up on top."

Boswell says one of the important things to keep in mind about C&I project management is that the installer is not at the top of the client's priority list. "It is very important to listen to the client - understanding, inherently, what they are doing operationally on-site," he says. "A lot of the project management is getting ahead of the things that we see pop up on a recurring basis. Despite your best efforts, things happen."

Go long

Steve Burns, a project manager at EnterSolar, recently completed a 1.5 MW rooftop solar array for Clare Rose, a beverage distributor in East Yaphank, N.Y. The customer's warehouse facility serves most of Long Island and is a hub of activity seven days a week at all hours.

According to Burns, the Clare Rose job had several advantages from a project-management standpoint. Most importantly, the facility was brand new, and the 269,000 square feet of roof space was essentially flat

and uncluttered by structures. Also, the facility itself was situated in an isolated location with a wide skirt of paved real estate on which to stage vehicles and construction equipment. On the flip side, the location was in a constant state of activity.

The logistics of the Clare Rose project revolved around four "crane days" spread out over the course of about a month, when a large crane EnterSolar hired was on-site to lift materials onto the roof.

"Tight coordination is needed to make sure that a given crane day had no impact on the customer's operations," Burns says. "We did not make them change around their plans. If we needed to use a bay that they were planning on using, they had enough flexibility to be able to move stuff around so that they could give us whatever areas we needed while still being efficient on their end."

A lot of planning goes into a crane day. On a given day, EnterSolar would have to clear quite a bit of space on the grounds. That was all coordinated with the customer well in advance. Sometimes the crane would have to be on the side of the building where active bays were located or where trucks would be coming and going. Burns says this went smoothly because he worked closely with the Clare Rose facility's operations manager, Steve Henz.

Because of the openness of the roof, if the crane could be properly coordinated with the customer's business requirements, it could, essentially, place a load anywhere that is required. This ability tended to improve the productivity of a given crane day.

The work on the front end of C&I projects revolves around managing the logistics of deliveries of material, personnel and equipment. Burns says that there is a lot of back-and-forth with the suppliers on the logistical side of things just to make sure trucks are going to be there, the crane is going to be there and EnterSolar's crews are going to be there.

“Those are the three things we really need to make sure are there on time and ready to go when the sun comes up,” Burns says. “We’ll work with manufacturers before crane day to receive trucks a day prior or ensure that trucks will be there first thing in the morning.”

For the Clare Rose project, EnterSolar used DCE racking. Typically, on the day before the crane arrives, EnterSolar crews get on the roof and start to mark out the outlines and skeleton of the array.

“With a roof like this, we would literally bring the feet up onto the roof and immediately begin to break down the pallet and start to distribute feet

to the end points that we’ve already mapped out,” Burns says. “The brackets are the same deal: load them up on the roof, break down pallets, start to distribute them. And, it’s the same with the rails. Within the first week or so, this rack was built entirely.”

In terms of personnel, EnterSolar had a Man Lift system on-site. Typically, for C&I projects, EnterSolar will either use a scissor lift or have the crews build a scaffolding stairwell outside of the building. Ra Power & Light’s Campbell says he favors scaffolding where possible. In either case, the objective is to avoid the necessity of the installation crews to enter the building for any reason.

“We have to be respectful of that and communicate well ahead of time what we’re doing on-site,” Boswell says. “We really try to minimize the time and the attention we need from the client.”

Ultimately, Boswell says the key to successful C&I project management comes down to fully preparing the client about what to expect and making sure that it is in lockstep with the installer on scheduling and what, exactly, will be happening on-site. “When you say it out loud, a lot of this seems like commonsense blocking and tackling,” he says. “But, it is easy to get swept up in the heat of a project and forget that.” ☞